

**I CLAIM:**

1. A water pumping system comprising:
  - a reservoir for receiving water,
  - a motor coupled to said reservoir to pump the water out of said
  - 5 reservoir,
  - a resistor coupled to said motor,
  - a comparator circuit coupled to said resistor,
  - said resistor being provided to generate a voltage signal and to
  - send the voltage signal to said comparator circuit, to determine
  - 10 whether said motor is loaded or unloaded,
  - a power supply circuit coupled to said motor, to supply electric
  - energy to energize said motor, said power supply circuit and said
  - motor and said resistor being coupled together in series, and
  - a control device coupled to said comparator circuit, to switch
  - 15 off said power supply circuit in order to turn off said motor when
  - said motor is unloaded.
2. The water pumping system as claimed in claim 1, wherein
- said resistor is coupled in front of said motor.
3. The water pumping system as claimed in claim 1, wherein
- 20 said resistor is coupled behind said motor.
4. The water pumping system as claimed in claim 1, wherein
- said comparator circuit includes a first amplifier coupled to said
- resistor to receive the voltage signal from said resistor, and a second
- amplifier coupled between said first amplifier and said control
- 25 device.
5. The water pumping system as claimed in claim 1, wherein
- said power supply circuit is provided to couple said motor to a DC

power.

6. The water pumping system as claimed in claim 5, wherein said power supply circuit includes two transistors and a second resistor coupled between said transistors.

5        7. The water pumping system as claimed in claim 1, wherein said power supply circuit is provided to couple said motor to an AC power.

8. The water pumping system as claimed in claim 7, wherein said power supply circuit includes a TRIAC coupled to the AC  
10    power.